AMSAT News Service Weekly Bulletins
Issue: ANS-134
Date: 2023-05-14
Sources: amsat-ans-2023-ans-134-weekly-hyperkitty-8357ace22f.txt

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AMSAT NEWS SERVICE
ANS-134

In this edition:

* Call for Nominations - 2023 AMSAT Board of Directors Election
* Dr. Nathaniel Frissell, W2NAF, is Guest Speaker at 2023 TAPR/AMSAT Banquet
* AMSAT and ARISS Events at Hamvention
* 2023 AMSAT Field Day Rules
* 2023 Field Day - More Thoughts
* ARISS News
* Upcoming Satellite Operations
* Hamfests, Conventions, Maker Faires, and Other Events
* Satellite Shorts From All Over

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat [dot] org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

ANS-134 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2023 May 14

Call for Nominations - 2023 AMSAT Board of Directors Election

AMSAT solicits nominations for the 2023 AMSAT Board of Directors election, to be held in the third quarter of the year. The seats of the following four incumbent Directors expire in 2023 and will be filled by this year's election:

- Jerry Buxton, N0JY
- Joesph Armbruster, KJ4JIO
- Robert Bankston, KE4AL
- Zach Metzinger, N0ZGO

Further, up to two Alternate Directors may be elected for one-year terms. A valid nomination for Director must be written and requires either one Member Society or five current individual members in good standing to nominate an AMSAT member. Written nominations, with the nominee's name, call sign, and contact information, as well as the nominators' names, call signs, and contact information, should be sent to the AMSAT Secretary:

Jeff Davis, KE9V
PO Box 11
Yorktown, IN 47396

AMSAT bylaws require that the nomination be written and in the form specified by the Secretary who has elected to accept written nomination materials via mail or in electronic form, including email or electronic image of a paper document. Fax transmissions cannot be accepted.

Email nominations may be sent to jdavis(a)amsat.org.

No matter what means are used, petitions MUST be received by the Secretary no later than June 15th. The Secretary will verify the qualifications of candidates and nominating members or Member Societies as petitions are received, and will notify candidates whether their nominations are in order by the end of June.

[ANS thanks Jeff Davis, KE9V, AMSAT Secretary for the above information.]

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of these disturbances." The grant covers two years of work.

Frissell said that the predictive, empirical TID models being developed uses data collected by the Reverse Beacon Network, WSPR, and PSKreporter - automated, global-scale radio communication observation networks operated by the amateur radio community. Undergraduate students help the faculty researchers to create algorithms used for the model development.

This NASA award complements a 5-year National Science Foundation grant of more than $616,000 that Frissell received in 2020. That investigation aims to understand the source of TIDs observed in amateur radio and other scientific datasets.

In addition, Dr. Frissell has a long-time passion for teaching and education. He earned his B.S. in Physics and Music Education from Montclair State University (2007). He voluntarily coordinated and taught amateur radio license classes and radio and astronomy merit badge classes. An Eagle Scout and Vigil Honor Member, Dr. Frissell taught science and technology for six summers at Forestburg Scout Reservation in New York, and taught amateur radio with the K2BSA group at multiple Boy Scout National Scout Jamborees.

[ANS thanks AMSAT, TAPR and the ARRL for the above information.]

AMSAT and ARISS Events at Hamvention

+ Thursday, May 18th – Dinner at Tickets
The annual AMSAT “Dinner at Tickets” party will be held at Tickets Pub & Eatery on Thursday, May 18 from 6:00 PM to 8:00 PM EDT. There is no program or speaker – just good conversation. Everyone is invited regardless of whether or not they helped with setup or plan to work in the booth. Tickets has a great selection of Greek and American food and great company! Food can be ordered from the menu; drinks (beer, wine, sodas and iced tea) are available at the bar.
Come as you are; no reservations required. Bring some friends and have a great time the night before Hamvention. Tickets Pub & Eatery is located at 7 W. Main St, Fairborn, OH 45324. (Telephone (937) 878-9022)

+ Saturday, May 20th – AMSAT Hamvention Forum
The AMSAT forum will be held from 1:10 PM – 2:10 PM in Forum Room 2. The forum will include updates on AMSAT’s operations, engineering, and Youth Initiative, and development programs. Arrive early, grab a seat, take in some air conditioning and catch up on the latest AMSAT happenings!

+ Saturday, May 20 - Dayton Hamvention Youth Forum – Saturday, May 20 at 9:15 AM
AMSAT member Grace Papay (KE8RJU) will present on the topic of “Amateur Radio Satellites Near and Far.” The time is 9:15 AM in Forum Room 2. Come support one of AMSAT’s youth ambassadors!

+ Saturday at 12:10 PM - ARISS 2.0: The future vision for Amateur Radio on the International Space Station
ARISS International Chair Frank Bauer, KA3HDO, will lead the main forum Forum Room 2. In December 1983, Astronaut Owen Garriott, W5LFL, electrified the world via his ham communications from the Space Shuttle Columbia. Starting at Hamvention 2023, ARISS will spend a year celebrating 40 years of amateur radio on human spaceflight vehicles! Our new vision, ARISS 2.0, will expand ARISS youth education outcomes, ham-in space operations, flight hardware systems, and even our space platform (in addition to ISS, think commercial space stations and lunar operations). Learn what ARISS is doing to support ham radio operations on human spaceflight vehicles – now and over the next 40 years. Expect some surprise guests and new announcements.

+ The ARISS booth will be in building 4, the “Volta” building. Four mini-forums will be hosted in the booth area. Those include:

- Friday – 10:00 AM: ARISS Educational Opportunities: SPARKing Interest in Amateur Radio in Teachers and Students
Presented by: Dan White (AD0CQ) ARISS-US Education Committee and professor of electrical and computer engineering at Valparaiso University. Learn how ARISS engages educators and students, including a demonstration of the SPARKI kit and STAR robot.

- Friday – 2:00 PM: ARISS Engineering

Presented by: Randy Berger (WA0D), ARISS-USA Director of Engineering. Find out more about how ARISS integrates with the space program partners and new design concepts.

- Saturday – 10:00 AM: ARISS How To – Intro to working the repeaters on the ISS
Presented by: Randy Berger (WA0D), ARISS-USA Director of Engineering. Want to know how to get started making contact with and through the ISS or interested in becoming an ARISS technical mentor, find out more in this session.

- Saturday – 2:00 PM – ARISS Post-Forum Q&A / Meet and Greet
Hosted by: Frank Bauer (KA3HDO) – ARISS International Chair and the ARISS team. Meet some of the team that makes things happen behind the scenes and get all your ARISS questions answered.

[ANS thanks AMSAT and ARISS for the above information.]

2023 AMSAT Field Day Rules

The AMSAT Field Day 2023 event is open to all Amateur Radio operators. Amateurs are to use the exchange as specified in ARRL rules for Field Day. The AMSAT competition is to encourage the use of all amateur satellites, both analog and digital. Note that no points will be credited for any contacts beyond the ONE allowed via each single-channel FM satellite. Operators are encouraged not to make any extra contacts via theses satellites (Ex: SO-50). CW contacts and digital contacts are worth three points as outlined below.

1. Analog Transponders

ARRL rules apply, except:

- Each phone, CW, and digital segment ON EACH SATELLITE TRANSPONDER is considered to be a separate band.

- CW and digital (RTTY, PSK-31, etc.) contacts count THREE points each.

- Stations may only count one (1) completed QSO on any single channel FM satellite. If a satellite has multiple modes such as V/u and L/s modes both turned on, one contact each is allowed. If the PBBS is on - see Pacsats below, ISS (1 phone and 1 digital), Contacts with the ISS crew will count for one contact if they are active. PCSat (I, II, etc.) (1 digital),

- The use of more than one transmitter at the same time on a single satellite transponder is prohibited.

2. Digital Transponders

We have only APRS digipeaters and 10m to 70cm PSK transponders (see Bob Bruninga's article in the March/April, 2016 issue of the AMSAT Journal).

Satellite digipeat QSO's and APRS short-message contacts are worth three points each, but must be complete verified two-way exchanges. The one contact per FM satellite is not applied to digital transponders.

The use of terrestrial gateway stations or internet gateways (i.e. EchoLink, IRLP, etc.) to uplink/downlink is not allowed.

For the Pacsats (FalconSat-3) or 'Store and Forward' hamsats, each satellite is considered a separate band. Do not post "CQ" messages. Simply upload ONE greeting message to each satellite and download as many greeting messages as possible from each satellite. The subject of the uploaded file should be posted as Field Day Greetings, addressed to ALL. The purpose of this portion of the competition is to demonstrate digital satellite communications to other Field Day participants and observers. Do not reply to the Field Day Greetings addressed to ALL.

The following uploads and downloads count as three-point digital contacts.

(a) Upload of a satellite Field Day Greetings file (one per satellite).

(b) Download of Satellite Field Day Greetings files posted by other stations. Downloads of non-Field Day files or messages not addressed to ALL are not to be counted for the event. Save DIR listings and message files for later "proof of contact."

You may make contacts with GreenCube, IO-117 and each one will count as 3 points as do other digital contacts.

Please note AMSAT uploaded messages do not count for QSO points under the ARRL rules.

Sample Satellite Field Day Greetings File:

Greetings from W5MSQ Field Day Satellite station near Katy, Texas, EL-29, with 20 participants, operating class 2A, in the AMSAT-Houston group with the Houston Amateur Television Society and the Houston QRP club. All the best and 73!

Note that the message stated the call, name of the group, operating class, where they were located (the grid square would be helpful) and how many operators were in attendance.

3. Operating Class

Stations operating portable and using emergency power (as per ARRL Field Day rules) are in a separate operating class from those at home connected to commercial power. On the report form simply check off Emergency or Commercial for the Power Source and be sure to specify your ARRL operating class (2A, 1C, etc.).

And Finally...

The Satellite Summary Sheet should be used for submission of the AMSAT Field Day competition and be received by KK5DO (e-mail) by 11:59 P.M. CDT, Tuesday, July 25, 2023. This year, we are using the same due date as the ARRL. The only method for submitting your log is via e-mail to kk5do(a)amsat.org or kk5do(a)arrl.net. I have not had a mail-in entry in over 6 years, probably even longer than that.

Add photographs or other interesting information that can be used in an article for the Journal.

You will receive an e-mail back (within one or two days) from me when I receive your e-mail submission. If you do not receive a confirmation message, then I have not received your submission. Try sending it again or send it to my other e-mail address.

Certificates will be awarded for the first-place emergency power/portable station at the AMSAT General Meeting and Space Symposium in the fall of 2023. Certificates will also be awarded to the second and third place portable/emergency operation in addition to the first-place home station running on emergency power. A station submitting high, award-winning scores will be requested to send in dupe sheets for analog contacts and message listings for digital downloads.

You may have multiple rig difficulties, antenna failures, computer glitches, generator disasters, tropical storms, and there may even be satellite problems, but the goal is to test your ability to operate in an emergency situation. Try different gear. Demonstrate satellite operations to hams that don't even know the HAMSATS exist. Test your equipment. Avoid making more than ONE contact via the FM-only voice HAMSATS or the ISS, and enjoy the event!

[ANS thanks Bruce Paige, KK5DO, AMSAT Director, for the above information.]

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It's that time of year again; summer and Field Day! Each year the American Radio Relay League (ARRL) sponsors Field Day as a "picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN!" The event takes place during a 23-hour period on the fourth weekend of June. For 2023 the event takes place during a 27-hour period from 1800 UTC on Saturday June 24, 2023 through 2100 UTC on Sunday June 25, 2023. Those who set up prior to 1800 UTC on June 24 can operate only 24 hours. The Radio Amateur Satellite Corporation (AMSAT) promotes its own version of Field Day for operation via the amateur satellites, held concurrently with the ARRL event.

This year should be as easy as last year since we have more than 10 transponders and repeaters available. Users should check the AMSAT status page at http://www.amsat.org/status/ and the pages at https://www.amsat.org/two-way-satellites/ for what is available in the weeks leading up to Field Day. To reduce the amount of time to research each satellite, see the current FM satellite table at https://www.amsat.org/fm-satellite-frequency-summary/ and the current linear satellite table at https://www.amsat.org/linear-satellite-frequency-summary/

If you are considering ONLY the FM voice satellites, there are ISS, SO-50, AO-91, PO-101 and possibly LilacSat. It might be easier this year to make that one FM contact for the ARRL bonus points with so many FM birds. The congestion on FM LEO satellites is always so intense that we must continue to limit their use to one-QSO-per-FM-satellite. This includes the International Space Station. You will be allowed one QSO if the ISS is operating Voice.

It was suggested during past field days that a control station be allowed to coordinate contacts on the FM satellites. There is nothing in the rules that would prohibit this. This is nothing more than a single station working multiple QSO's. If a station were to act as a control station and give QSO's to every other field day station, the control station would still only be allowed to turn in one QSO per FM satellite while the other station would be able to submit one QSO.

The format for the message exchange on the ISS or other digital packet satellite is an unproto packet to the other station (3-way exchange required) with all the same information as normally exchanged for ARRL Field Day,
e.g.:

W6NWG de KK5DO 2A STX
KK5DO de W6NWG QSL 5A SDG
W6NWG de KK5DO QSL

If you have worked the satellites on Field Day in recent years, you may have noticed a lot of good contacts can be made on some of the less-populated, low-earth-orbit satellites like FO-29, AO-7, EO-88 or the XW satellites. During Field Day the transponders come alive like 20 meters on a weekend. The good news is that the transponders on these satellites will support multiple simultaneous contacts. The bad news is that you can't use FM, just low duty-cycle modes like SSB and CW.

[ANS thanks Bruce Paige, KK5DO, AMSAT Director, for the above information.]

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The ISS callsign is presently scheduled to be OR4ISS.
The scheduled crewmember is Warren Hoburg, KB3HTZ.
The ARISS mentor is W4NTR.
Contact is go for Friday, May 19, 2023 at 18:20:31 UTC.
Watch for Livestream at www.ariotti.com starting 15min before AOS.

Fairview Elementary, Olathe, KS, telebridge via VK4ISS.
The ISS callsign is presently scheduled to be NA1SS.
The scheduled crewmember is Warren Hoburg, KB3HTZ.
The ARISS mentor is AJ9N.
Contact is go for Friday, May 19, 2023 at 18:58:08 UTC.

Saint Petersburg, Russia, direct via TBD.
The ISS callsign is presently scheduled to be RS0ISS.
The scheduled crewmember is Dmitry Petelin.
The ARISS mentor is RV3DR.
Contact is go for Saturday, May 20, 2023 at 19:15 UTC.

The latest information on the operation mode can be found at
https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information.]

Upcoming Satellite Operations

+ IO74TJ; May 15-17
David, G0MRF has booked a short trip over to the Isle of Man, travelling out very early on Monday, May 15 and leaving the Island Wednesday, May 17 in the afternoon.
The callsign will be GD0MRF/P. He will be taking an IC-9700 and some LEO equipment as well as a dish/converters for QO-100.

Plans are as follows:
 - Monday, May 15 from 08:00 UTC. QO-100. Will start with FT modes and move to SSB later in the day. If no takers later, he will move onto LEO/MEO.
 - Tuesday, May 16 will focus on LEO/MEO. Mainly JO-97, RS-44 and IO-117; Especially any passes that cover NA.
 - Wednesday, May 17th he will have a short time to drive around the Isle of Man TT course, but will come back on QO-100 for about one hour mid-morning for anyone who missed him on Monday.

QSL via LoTW. Updates while he's on Twitter @g0mrf.

+ EN84, EN85 and EN76; May 26-May 29.
Mike, N8MR will be using an Icom 9700, Arrow antenna and SAT controller. Listening for Europe for eastern passes. All QSOs going to LoTW as N8MR.

[ANS thanks Paul Overn, KE0PBR, AMSAT rover page manager, for the above information.]

Hamfests, Conventions, Maker Faires, and Other Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

+ Dayton Hamvention
May 19-21
See "AMSAT and ARISS Events at Hamvention" above for scheduled events.
Greene County Fair and Expo Center, 210 Fairground Road, Xenia 45385
https://hamvention.org/

+ AMSAT Symposium and Annual Meeting
October 20-21, 2013
Dallas, Texas

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

AMSAT Ambassador Clint Bradford, K6LCS, says,

“Think a 75-minute presentation on “working the easy satellites” would be appropriate for your club or event? Let me know by emailing me at k6lcsclint (at) gmail (dot) com or calling me at 909-999-SATS (7287)!”

[ANS thanks Paul Overn, KE0PBR, AMSAT Events page manager, for the above information.]

Satellite Shorts From All Over

+ The 27-year-old FO-29 is still operational, but is in a period of periodic eclipses. JAMSAT control ops turn it on during some weekend passes over Japan, and it remains on while in the sun. But because the batteries failed long ago, it turns itself off again during eclipse. When the satellite returns to full sun, it will become reliable once again. Also, the FO-99 operating schedule for May is at https://www.jamsat.or.jp/?p=2128. [ANS thanks JAMSAT for the above information.]

+ When the crewed Artemis II mission makes its lunar flyby in late 2024, we’ll be able to see video of the moon like never before — and it’s all thanks to lasers. Along for the historic journey to the moon will be the Orion Artemis II Optical Communications System, or O2O — making Artemis II the first crewed lunar flight to demonstrate laser communications technology. The O2O system will be capable of returning high-resolution images and video of the lunar surface back to Earth with a downlink rate of up to 260 megabits per second. The laser system will also be able to send and receive procedures, flight plans, voice messages and other communications between the Orion spacecraft and mission control on Earth. Read the complete story at https://www.cnn.com/search?q=laser&from=0&size=10&page=1&sort=newest&types=all&section=. [ANS thanks cnn.com for the above information.]

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Frank Karnauskas, N1UW
n1uw [at] amsat [dot] org